Official U.S. Army Magazine

Soldiers

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Serious Army Gaming

U.S.ARMY

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SOLDIERS | SEPTEMBER 2008 | VOLUME 63, NO. 9

Cover Image
Montage by Peggy Frierson

Correction to last month's issue:

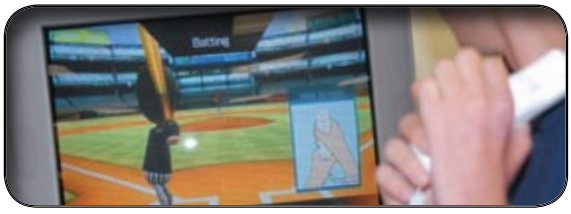
The former Army Vice Chief of Staff, Gen. Richard A. Cody (ret.), called to our attention an error in his farewell story, featured on pages 28 through 31 in the August issue of Soldiers.

The opening paragraph of the article read, "A master aviator who saw combat duty in both Vietnam and the Persian Gulf…" Gen. Cody stressed that he never saw combat in Vietnam, nor has he ever made any claims of that nature or worn any Vietnam combat ribbons.

Gen. Cody served with honor and commitment throughout his 36-year career, and has never claimed distinctions to which he is not entitled.

The Soldiers editorial staff accepts all responsibility for the misrepresentation, and offers its sincerest apologies to Gen. Cody and his family for the error. We wish Gen. Cody and his family all the best in their future endeavors, and thank them for their tireless service to Army and country.

Features



Departments

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U.S.ARMY

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The Official
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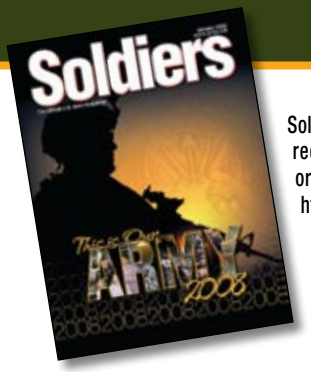

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"Gifts to Army" Web Site Launches

THE "Gifts to Army" Web site, launched in July, is an online resource developed to streamline and process gifts to the Army that benefit Soldiers and their families.

Citizens often ask Soldiers, their family members and Army civilians how they can support their Army. They want to know how they can help men and women in uniform. This Web site provides the public an online resource to answer the question: "How can we help?"

"Many individuals have asked how they can help the Army," said Joyce Morrow, administrative assistant to the secretary of the Army. "We appreciate how generous the public is and the concern they have for the welfare of our Soldiers and families. We've developed this Web site to provide information on how to contribute money, goods or services to benefit Soldiers and their families."

The launch of the site centralized the many venues and paths for the public whose offers of support fall within the Army's overall Gift Program, which is managed by the Office of the Administrative Assistant to the Secretary of the Army. Contribution options addressed on the site include support for the Army, Soldiers and their families, wounded warriors, Army installations and more.

"This Web site is not intended as a solicitation, but merely as a way to provide information on the options and programs available to those who have expressed a desire to make a contribution," said Morrow.

The Army Gift Program has existed for many years. However, the law allowing the Army to accept gifts was recently amended to allow the Army to accept gifts to assist wounded Soldiers, wounded civilian employees and their families.

America's support of its military is not new. During World War II, tin drives, support for food rationing and canteens were common. At a train depot in North Platte, Neb., a small group of volunteers in a city of no more than 12,000 provided food, magazines, and conversation to the hundreds of troop trains that stopped in their town. This major undertaking went on for the duration of the war and was done without government support.

The people of the United States carry on the tradition of caring for and supporting their men and women in uniform. The "Gifts to Army" Web site provides a central source of information to refer those interested in contributing to and supporting Soldiers and Army families and offers ways for them to express that support, should they choose. sm

Pfc. Amanda Tucker

Elizabeth Dowell, a college student from the University of Louisville, hands a package of donated items to Spec. Daniel Klepsch, a Soldier from the 3d Sustainment Command, Fort Knox, Ky. The "Gifts to Army" Web site, launched in July, centralizes the various venues and paths available to members of the public who want to offer support to Soldiers, their families, wounded warriors, Army installations and more.

For more information, visit the "Gifts to Army" Web site at http://giftstoarmy.army.mil/

History

Story by Carrie McLeroy

GAMING has long been an important tool used by militaries to assist in training, analysis and mission readiness. What began 5,000 years ago as warfare models using colored stones and grid systems on a board has evolved into state-of-the-art computer-simulation systems that allow users to customize their virtual experience based on real-life events.

Military simulation games evolved over time, eventually leading to the Roman legions' use of sand tables and miniature replicas representing the battlefield in the 1st century A.D. They were visual tools used to play out strategic scenarios. These devices remain in use today at military academies and schools, but are slowly being replaced by computer simulations.

New York Army National Guard Col. Geoffrey Slack, the operations officer of the 42nd Infantry Division, reviews the scheme of maneuver for a joint/combined exercise over a "sand table." Sand tables were one of the earliest forms of military simulation, beginning with the Roman legions' use of them in the first century A.D.

# of Military Gaming

Early Systems

The greatest advancements in pre-computer war games came in the mid 17th century, said Roger Smith, chief scientist and technology officer for the Army's Program Executive Office for Simulation, Training and Instrumentation. Germany's Christopher Weikmann designed "Königspiel," "the King's Game," one of the earliest warfare board games, which allowed a player to visualize the movement and actions of his forces on a playing board.

"That was the beginning of the most important changes. Before that everything was literal, a direct representation of the battlefield with no way of abstractly representing behaviors," Smith said. When the Germans started using paper board games, they were able to estimate battlefield actions using probability and other forms of mathematics.

In 1811, another German, Baron von Reisswitz, developed "Kriegsspiels," a more detailed board game using contoured terrain and porcelain soldiers, which introduced the concept of a starting scenario with a stated military objective, Smith said. The Germans were "creating the foundations of mathematically driven warfare that would be programmed on computers in the 1950s."

Inventors further refined the board war game in the 1950s with hexagonal overlays to track movement and engagement, and a combat-results table for calculating attrition and movement, which incorporated the impact of terrain on combat activities, Smith said.

"The RAND Corporation was working on a system to present theater-level warfare in a form that would allow more mathematically accurate actions than those found on sand tables and board games of earlier centuries," he said.

At the same time, Charles Roberts, an entrepreneur awaiting his Army commission, developed a similar game. Both systems also introduced combat-results tables and the use of dice to add random events and outcomes to the "battle."

Roberts established Avalon Hill, a commercial entertainment company, in 1958, and used the military planning and training tools to popularize war-gaming as a form of entertainment. "Thus was born the lasting tension between games as serious military tools and games as a form of entertainment," Smith said.

Casual players wanted a user-friendly game, but the military needed accuracy and began using computing machines to assist with more involved calculations. Technological advances made these devices more accessible, Smith said, and incorporated more detailed mathematics and logic into game play. The forms of the games themselves though, remained relatively unchanged.

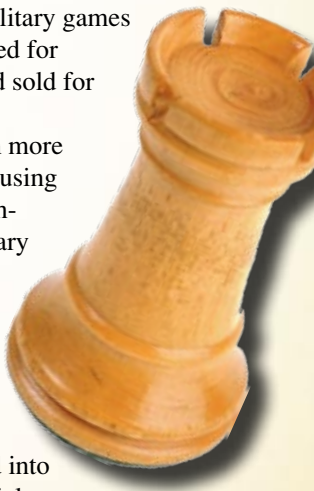
Computers Arrive

The Army Operations Research Office at Maryland's Johns Hopkins University developed the first truly computerized war games. Beginning with "Air Defense Simulation" in 1948 and the "Carmonette" series of simulations in 1953, these systems eliminated much of the manual work of moving pieces, rolling dice, looking up results in a table and calculating final results, Smith said.

"The players could focus on the tactical movements and leave the complexity of manipulation to the computer," he said. Game size was expanded, limited only by the computer's capabilities.

As developers' understanding of the power of the computer grew, they were able to "incorporate mathematic and logical algorithms that were far beyond what could be managed with a human-driven paper game," Smith said. The 1970s saw the first iterations of today's networked, multiplayer simulations. Games like the McClintic Theater Model at the Army War College not only improved mathematical models of warfare, they incorporated attractive system graphics.

In today's personal-gaming age, Smith said entertainment games and technologies are being modified and used in the military domain, and traditional military games have been re-tooled for casual gamers and sold for entertainment.



"We are much more comfortable with using entertainment technologies for military training today," Smith said. Military-training simulations like JANUS and SIMNET have been incorporated into simpler commercial games.

Lt. Col. Richard Goldenberg

(Above) "DARWARS Ambush," an adaptation of "Operation Flashpoint," is a simulation game in use throughout the Army. It is one of the few broadly deliverable products available.

(Right) Soldiers at Fort Hood, Texas, "play" DARWARS in a networked gaming lab. The simulation game provides Soldiers with a series of scenarios, but also affords them the opportunity to modify scenarios and replicate real-life experiences.

"America's Army," a modification of "Unreal Tournament;" "DARWARS Ambush," an adaptation of "Operation Flashpoint;" and X-Box's "Full Spectrum Warrior" have all been used by the military.

"Marine Doom" was one of the earliest examples of modifying games for training purposes, Smith added.

The game was an early modification of id Software's "Doom II." Marine Lt. Scott Barnett, the project officer, and Sgt. Dan Snyder, a designer and modeler, tweaked the commercial off-the-shelf product in the mid-1990s to enhance teamwork, coordination and decision-making training.

"It was primitive, but they showed the big idea of using games for training," Smith said. At the time, the Army's leaders did not realize the full potential of COTS games and their value to military training, so research into its uses was limited.

"As games have become more sophisticated, and as the military has come to understand them better, we have been able to identify better means of leveraging these technologies for serious purposes," Smith said. "We have come a long way in how we use games. Every year somebody takes it a step further."

Researchers and developers today are faced with the challenge of creating game-based software that can be deployed around the globe as the demand for them increases, Smith said. Rather than waiting for official products to reach them, "Soldiers are putting these COTS games into their own hands and modifying them for their specific training needs."

One of the few broadly deliverable products in use today, "DARWARS Ambush" has been deployed to Soldiers in the States and abroad, and has become a valuable tool for both users and developers.

"We bring the system out to the field and create a gaming lab with a networking center," Smith said. A tech provides a series of scenarios to the Soldiers and teaches them how the tools work and how to change those scenarios to the extent the system will allow.

"The Soldiers just dive in and start 'playing' the scenarios," Smith said. "Then they start adapting those scenarios to make them more realistic. They are not only learning the given scenarios, but teaching themselves to replicate real-life experiences to re-live and recreate what they've seen on their own missions."

The users are able to take another look at specific events from a stress-free environment and provide developers with valuable input about the effectiveness of the training.

Smith said that modern tools for training have spread beyond combat to medical and cultural scenarios. The military has also expanded its research to varied uses of artificial intelligence.

Through a sustained partnership among researchers, developers and users, Smith said the Army continues to look at the technology within games, rather than the games themselves, as a means of creating alternatives for many of the established tools for training.

"There is more of an acceptance of these technologies every year," Smith said. "We are better able to answer the questions that have surrounded military simulations, and we are able to more accurately translate military models into accurate simulations." **sm**

Improving "America's Army"

Members of the Army Game Project spent five days at Fort Jackson, S.C., completing simulated basic combat training. The team members took part in physical training and weapons familiarization.

Story by Carrie McLeroy

IN 2000 the Army and the gaming industry forged what is so far an eight-year partnership, combining Soldiers' knowledge of all things Army with industry professionals' understanding of how technology can be leveraged to relate the Army experience.

Col. Casey Wardynski, director of the Office of Economic and Manpower Analysis at the U.S. Military Academy at West Point, N.Y., and head of the "America's Army" program, developed a concept study in 1999 that "envisioned using computer game technology to provide the public a virtual Soldier experience that was engaging, informative and entertaining," according to "America's Army" officials.

The Army set up the Army Game Project at the Naval Post Graduate School in Monterey, Calif., in January 2000. The team was granted unprecedented access to units, training and equipment, and gained information and insights that were eventually modeled in the game to contribute to its authentic Army "feel." In its most widely used form, "America's Army" is an online, downloadable, PC-based game that allows players a portal into the Army, from basic training to special forces missions.

Unique to America's Army, however, was the incorporation of values and consequences in a first-person action environment, which set it apart from its commercial counterparts.

"We entered into a marriage of game-industry technical expertise and Army core values, and applied that to something really meaningful," said Phillip Bossant, executive producer of the America's Army Public Applications team.

From its earliest version, "America's Army: Recon" (v1.0.0), players

"America's Army" public-applications concept artists create the game's initial visual statement. The artists' images, such as the encampment seen here, are often developed before elements such as characters and terrain.

were bound by the Rules of Engagement, teamwork and adherence to the seven Army core values. Two dozen releases later, success in the game is still built upon team play, and still guided by the Army's values of loyalty, duty, respect, selfless service, honor, integrity and personal courage.

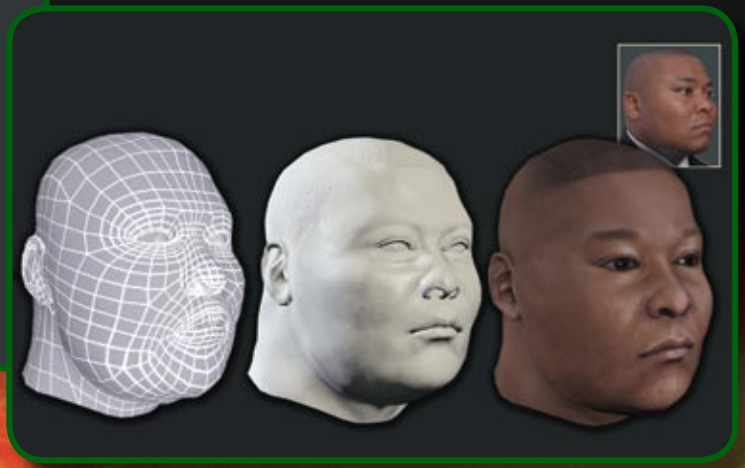
"America's Army" was the first to use the Unreal Engine 2.0 to support its game.

"Unreal hadn't been released yet — our game came first," Bossant said. "'America's Army' looked nothing like the other games. It had high-quality graphics, animation and sound, even though the game was free to players. I think everyone expected it to be junk. They were all surprised."

The game was first introduced in 2002, and was an instant favorite at the annual industry trade show in Los Angeles.

Eight years later, "America's Army" continues to be one of the top 10 online action games. To keep up with industry technical standards and an ever-increasing consumer appetite for dynamic game play, the public "America's Army" team has consistently used new technologies, platforms and themes to enhance game play. The current version of the game, "America's Army: Special Forces (Overmatch)", combines high-fidelity graphics supported by the Unreal Engine 2.5 with dynamic game-play options to give players a "soup-to-nuts virtual experience within which to explore entry-level and advanced training, as well as soldiering in small units," Bossant said.

"We have virtually taken our players through boot camp and airborne training, and even introduced them to the special forces," Bossant added. "Through 'America's Army,' players have learned about rules of engagement, lifesaving, laws of war and Army values."



Characters' heads were designed and refined by members of the AA public- applications team, which has models representing a range of ethnicities and features.

While the AA team is currently working on a new version of the game using the Unreal Engine 3.0, the current game is still widely popular. There are more than nine million registered users, according to Bossant, and more than 900 fan sites have been established around the world.

The new game, scheduled for release in the coming year, will be faster to download, have better graphics and will expand on Army roles and missions.

"This game will continue to build upon the marriage between thoroughbred game technologies and the Army," Bossant said. "We reviewed lessons from our first nine years, and we are making decisions based on those lessons to make the game a more compelling and comprehensive test drive of the Army. We'll keep the aspects that are great about the current game, and use the new engine to create an even better version."

Most of the developers and artists on the America's Army team have participated in a condensed version of basic combat training at various installations, to get a better feel for what the Army is all about. Through the training and other installation visits, the team has built relationships with Soldiers who understand what they are trying to accomplish through the game.

"America's Army 3.0" will also expand realism within game play. "In everything a player does, from the training phases to mission play, there are consequences for their actions," Bossant said. For example, a player may choose to take on a mission without additional training, but his game play will not be as effective as that of a player who perfected the training phases. Or a player will be able to choose which gear to don, but if he chooses the maximum amount of gear, he will move slower than a player who doesn't. Players don't follow the rules of engagement or conduct themselves according to the Army values are penalized.

"We're figuring out how to make these elements important to virtual players, and through that instill pride in their achievements in the game," Bossant said. "They have a persistent character in the game. If they invest the time, they're likely to maximize their pursuit of opportunities and options. Advancement as a Soldier in the game means something to them. Other games don't offer that."

The driving force behind the new game, Bossant added, is to make players understand that every virtual achievement is significant. Through game play, they're able to begin to understand the Army Values, what they mean and how they pay off in life and to team mission accomplishment. Artists and developers are leveraging what they know about gaming along with what Soldiers are teaching them about the Army to portray significant moments throughout the game, such as basic training graduation.

Bossant also said that with the release of the new game, there would be a release schedule so players know what updates are coming and when they'll take effect. This not only allows players to foresee scheduled enhancement, it gives them an opportunity to train in the game, to be prepared to take advantage of new missions, roles and capabilities.

"We anticipate that potentially profound moments become possible in the game," Bossant said. "We can get your heart racing, but can you have an emotional response to what you do in the game? If we can accomplish that, we have an opportunity to add a whole new level of depth to our virtual world." sm

A member of the AA public-applications team fires an M-16A2 rifle during familiarization training conducted at Fort Jackson, S.C. The training gave game developers the opportunity to experience various facets of Army life and interact with Soldiers.

Leveraging "America's

Story by Carrie McLeroy

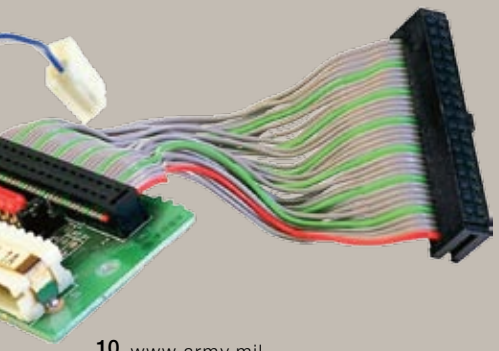
The "America's Army" platform is inspiring a growing number of training devices and simulators, including the Common Remotely Operated Weapons Station Basic Skills Trainer, recently fielded in Iraq.

WHEN in 1999 Col. Casey Wardynski pitched senior Army leaders the concept of using computer-game technology to develop an engaging and entertaining virtual Army experience, two things were certain: games about the Army were widely popular, and the Army was facing challenges communicating with technology-savvy young Americans about Army career opportunities.

Wardynski did not want to repurpose an existing off-the-shelf product, but rather develop a game in-house, from inception to production. Research and development began in 2000 at the Naval Post Graduate School in Monterey, Calif.

The Army Game Project staff introduced training and education as "integral elements of a Soldier's development," AA officials said. Players are able to explore progressive individual and collective training events in the initial phases of the game.

"As players successfully advance through these individual events, they gain access to new capabilities, adventures and unit assignments, including small-unit multiplayer operational missions," according to game literature.



More than eight years and 24 iterations later, "America's Army" has grown in ways its originators couldn't have imagined. Through shared research and development with its public-applications team, Wardynski, Army project manager for "America's Army," said the game platform has extended its reach to support warfighters, instructors and students throughout the Army.

The first version of the web-based game was launched on July 4, 2002. In the spring of the following year, the U.S. Secret Service approached the AA team, wanting to repurpose the game for training. "People began to see that gaming platforms could solve their training requirements," Wardynski said.

Army special forces began to see the game as a way to further develop adaptive thinking skills like leadership and negotiation, "soft skills" that were less tangible and non-kinetic.

Although the game began as an outreach tool, providing players an inside look at the Army, it has been cultivated into a new generation of inexpensive, PC-based, Web-deployable, highly interactive training tools, said Frank Blackwell, software manager for "America's Army" and all training applications based on the game.

Because the Army owns the license to the game, he said, developers can use existing aspects of the public game as starting points for alternate applications.

"There is a common software base. When a customer has a specific application in mind, we are starting with 50 to 60 percent of the solution. Our biggest challenge now is working with customers to define requirements for specific systems," Blackwell said.

Rather than taking years to develop training solutions with enormous budgets, developers are able to use

Army”

Also born from “America’s Army” technologies, the Army’s Live-Fire Applications program *(above and below)* allows Soldiers to fire live rounds into a virtual urban-combat environment. The targets and environments are projected on the inside walls of “a shoot house.” A Live-Fire Sniper Simulator is also under development.

and expand on technologies already in use.

“This technology accelerates the requirements phase,” Blackwell added. “It opens up virtual exploration to other customers who couldn’t afford these training tools before.” Funding and research used for the public game directly feed the government applications, and vice-versa.

The “America’s Army” platform is currently being used in dozens of virtual training systems throughout the Army, including:

America’s Army Live Fire Applications Program

This program allows live ammunition to be fired in a virtual environment. Targets are projected on the walls of a “shoot house” in a virtual urban-combat environment. Instructors can manipulate live or artificial intelligence-controlled combatants, non-combatants and operational forces to challenge Soldiers in multi-player mode. Networking and position-tracking systems enable two live forces in different locations to virtually engage each other using live ammunition.

The AA platform was also used to develop a TOW Improved Target Acquisition System simulator for the Army's ITAS Basic Skills Trainer. The simulation includes both the Humvee-mounted system *(above)* and a tripod version.

The TOW ITAS simulator allows Soldiers to practice all the targeting skills needed to successfully use the wire-guided anti-tank system in combat, yet saves units both money and training time.

Common Remotely Operated Weapons Station (CROWS) Basic Skills Trainer (BST)

The AA platform was used to develop CROWS, a stabilized, remotely controlled weapon mount that allows Humvee gunners to engage targets in 360-degree coverage. It has been fielded for training in Iraq.

Javelin Basic Skills Trainer

The AA team also developed a Javelin missile system simulator for the "America's Army: Special Forces (Overmatch)" game that was specialized for use as an Army training device.

TOW Improved Target Acquisition System (ITAS)

Developers leveraged the AA platform to develop a simulator for the Humvee- or tripod-mounted, anti-armor missile system that uses all generations of the TOW.

PackBot and TALON EOD Trainers

The Explosive Ordnance Disposal Technology Directorate at the U.S. Army Armament Research Development and Engineering Center has expanded on AA technology to create virtual trainers that enhance EOD training. The trainers use virtual PackBot and TALON robots to de-

Seen here mounted on a Humvee, the Common Remotely Operated Weapons Station allows Soldiers to engage targets from under cover. Technologies borrowed from "America's Army" helped produce the CROWS trainer (opposite page), which is currently in use in Iraq.

Soldiers have long used "shoot houses" to hone their live-fire skills. But the addition of simulation technologies drawn from, or enhanced by, "America's Army" has added significantly to the training value.

The simulated control screen in the CROWS trainer faithfully recreates both the layout and operation of the actual system, allowing Soldiers to become skilled at using the device before they've actually seen a real example.

stroy improvised explosive devices used by "enemy" forces.

Adaptive Thinking and Leadership Simulation

The AA platform is also used to train special forces Soldiers in critical-thinking skills. Soldiers are able to call on their strengths and pinpoint weaknesses in mental agility, cultural awareness, interpersonal adaptability and communication. The simulator enables role-play in an instructor-controlled, dynamically changing environment that teaches Soldiers to anticipate the consequences of their actions in various situations.

Convoy Skills Engagement Trainer

This trainer gives Soldiers a mobile, flexible and cost-effective simulation experience for convoy skills. According to the AA team it "complements live training and facilitates mission planning and rehearsals while validating tactics, doctrine and weapons familiarization." The CSET can be deployed around the world as a desktop software program. It can also be enhanced with organic unit weapons with drop-in recoil systems.

XM25 Air-Burst Weapon System, XM307 Advanced Crew-Served Weapons System

Both systems have been in-

As with all training simulations based on "America's Army," the CROWS system features high-definition visuals that accurately reproduce the system and the environments in which it is used.

A Soldier experiments with the CROWS trainer at a trade show. The system has proven to be extremely effective in the training role, while also reducing the amount of time, and money, spent on teaching Soldiers to use the actual CROWS.

An animated Soldier prepares to fire a Javelin man-portable, shoulder-fired missile in a scene drawn from the Javelin Basic Skills Trainer. The system was developed from a simulation created for "America's Army: Special Forces (Overmatch)."

tegrated into "America's Army" environments to enhance weapon visualization and accelerate prototyping. Soldiers around the globe use the virtual prototyping system to test weapons and provide feedback to their developers, saving the Army time and money.

The game platform has been leveraged in a broad range of other training environments, from reconnaissance, surveillance and target acquisition to non-lethal-weapon-training systems.

As technology improves in the gaming industry, "America's Army" developers on both the public and government fronts are able to leverage those advances to create realistic environments that enable gamers and Soldiers to play and train in dynamic, interactive and realistic environments.

"It is huge that we can compete with industry, and draw the results of that back into the Army," Wardynski said. "We are seeing how fast the Army can adapt and learn." **sm**

Simulations allow Soldiers to gain familiarity with weapons systems, while at the same time introducing them to the environments and many of the situations in which the actual weapons might be used.

Training Soldiers With "America's Army"

Story by Olivia Mendoza

WHO says the Army can't be fun and games?

Soldiers at Fort Sam Houston, Texas, are using the America's Army Game at the post's Battle Simulation Center to practice warrior tasks and battle drills.

They've been training on the software for three years, said Ates Bulent Sencalar, site manager for General Dynamics Information Technology. The Noncommissioned Officer Academy, 470th Military Intelligence Brigade, 228th Combat Support Hospital, and Reserve and National Guard units are among those undergoing the training.

The "America's Army" simulator helps familiarize students with troop-leading procedures and tactical maneuvers in urban environments, allowing them to better understand how their decisions affect the whole unit, said Sgt. 1st Class Reginald Powell, an instructor for the Army Medical Department NCOA.

Powell and some 140 Basic NCO-Course students recently trained on the "America's Army" simulator.

Through the video game, Soldiers get to practice what they've learned in the classroom. "'America's Army' gives them visual 'boots on the ground,'" said Sencalar.

The scenario begins with a squad of six to nine Soldiers in a simulated Iraqi village. Their mission is to conduct a dismounted patrol, clear buildings and secure the area of weapons left behind by insurgents.

In the game, as in the Army, the Soldiers' collective goal is to accomplish a mission as a team and adhere to the Army's core values. The software also gives Soldiers a chance to prepare for a follow-on field training exercise at nearby Camp Bullis.

"This is a great training method, because it gives us an idea of what to expect and what we need to improve on," said Sgt. Hilda Cabrera, a former BNCOC student.

"The students really enjoy the simulation, because it's like a game for them. At the same time, they know they must take the "game" seriously. "If they don't, and they're careless and perform improperly, a sniper, bomb or improvised explosive device could take them out," said Powell.

Olivia Mendoza works in the Fort Sam Houston Public Information Office.

Iraq
Soldiers interact with local civilians while patrolling the Sadr City district of Baghdad.
— Photo by Tech. Sgt. Cohen A. Young, USAF

Elizabeth M. Lorge

Brig. Gen. Loree K. Sutton *(left)*, director of the DOD Center of Excellence for Psychological Health and Traumatic Brain Injury, joins wounded warriors, including Spc. Freddy Meyers *(far right)* to break ground for the National Intrepid Center of Excellence for Psychological Health and TBI at Bethesda National Naval Medical Center, Md.

New Psychological Health, TBI Center

WOUNDED Soldiers and senior military leaders broke ground at Bethesda National Naval Medical Center, Md., May 3 for the National Intrepid Center of Excellence for Psychological Health and Traumatic Brain Injury.

Scheduled to open in late 2009, NICOE will be a $70-million, 75,000-square-foot treatment, rehabilitation and follow-up facility for servicemembers with TBI, post-traumatic stress disorder and other complex psychological issues, as well as a research, testing and education center.

"This center represents America's dedication to providing first-class treatment for troops who may be suffering combat-related stress and mental illness," said Secretary of Defense Robert Gates.

The facility will be the research and educational branch of the Defense Center of Excellence for Psychological Health and TBI, which promotes resilience, recovery and reintegration for servicemembers and their families, Gates said.

The DCOE has screened about 50,000 primary-care visitors for depression and PTSD, and coordinated 18 TBI training events this year.

Medical personnel at NICOE will treat the most severe TBI cases using a range of resources, including neurology, neuropsychology, psychology, psychiatry, cognitive therapy and pharmacological therapy departments, as well as an occupational therapy gym, gait lab, outdoor and sight rehabilitation spaces, vehicle and firearm simulators and a virtual-reality room.

The center will also have education and recreation activities for families, and the Fisher House Foundation will build three new Fisher Houses so family members can stay close to patients during the extended recovery process.

Funded by the Intrepid Fallen Heroes Fund — which also built the Center for the Intrepid at Brooke Army Medical Center in San Antonio, Texas, an advanced physical-rehabilitation facility for amputees — the center will be given to the Department of Defense upon completion.

For more information, visit **www.fallenheroesfund.org**. — *Elizabeth M. Lorge, Army News Service*

Army Needs Volunteers for

REGISTRATION for the Army's 2008-2009 eCYBERMISSION competition began Aug. 1 and will continue through Dec. 19.

Now entering its seventh year, eCYBERMISSION is a free, Web-based competition for youth in grades six through nine designed to increase interest in math, science and technology. Teams consist of three or four students, and their projects, known as "mission challenges," focus on solving problems in their communities, educating people about them and developing unique solutions to them using math, science and technology.

Students must choose a project related to one of four categories: health and safety; arts and entertainment; sports and recreation; or the environment.

Each year the Army reaches out to Soldier and civilian volunteers with active clearances to provide online support for the competition. eCYBERMISSION officials

Carrie L. McLeroy

Mandy Wirt, 6th-grader and member of the eCYBERMISSION "Sandpipers" team, inspects a human brain as other students await their turn during an educational enrichment event at Walter Reed Army Institute of Research.

said volunteers can, "have varying backgrounds and areas of expertise, but also have an interest in promoting science, math and technology." Interested individuals can download a volunteer program fact sheet and register at www.ecybermission.com.

Cyber Guides provide guidance to teams and answer questions throughout the competition via the Web. They use discussion forums, chat rooms and instant messaging to communicate with students, serving as Internet-based coaches who provide information about the competition to guide competitors through the cyber-science fair process.

The eCYBERMISSION team said Cyber Guides must commit to being online for six 4-hour shifts between now and Feb. 27. Shifts will take place from 9 a.m. to 9 p.m. EST, Monday through Thursday; noon to 4 p.m. EST Saturday; and 6 to 10 p.m. EST Sunday. Shifts will not be scheduled on Fridays, Thanksgiving (Nov. 22 to 29) or Christmas and New Years (Dec. 20 to Jan. 1).

Virtual judges are also needed March 2 through March 30. These volunteers will independently evaluate and score about 20 mission folders online. Officials said it would take judges about an hour to review each folder, and an estimated 20-25 hours to review all projects. — *Carrie McLeroy*

To find out more, and to register as a volunteer go to **www.ecybermission.com,** or contact the volunteer program coordinator by emailing **volunteerprogram@ecybermission.com** or calling Mission Control at 1-866-GO-CYBER (462-9237).

Army Launches Recruiter Assistance Program

ACTIVE-duty enlisted Soldiers and participants in the Delayed Entry Program can now serve as assistant recruiters and earn extra money in their off-duty hours.

The Army Recruiter Assistance Program, or A-RAP, will pay these Soldiers $1,000 when a recruit they refer enlists, and another $1,000 when that recruit ships to basic combat training.

Elizabeth M. Lorge

Enlistees are sworn in by Army Chief of Staff Gen. George W. Casey Jr. during celebrations on June 13 for the Army's birthday. While in the Delayed Entry Program, future Soldiers — and active-duty Enlisted Soldiers — can receive up to $2,000 for referring other new recruits into the Army through the Army Recruiter Assistance Program.

That's often months sooner than the bonuses all Soldiers, active-duty, reserve-component and retired, and Department of the Army Civilians, are eligible to receive under the $2,000 referral program. Under the $2K program, these bonuses, also in payments of $1,000, are not available until the recruit starts basic training, and then completes advanced individual training. Soldiers can participate in both recruiting programs, but not by referring the same prospect twice, officials said.

"A Soldier is kind of like a walking billboard," said Al Green, the chief of the Recruiting Policy Branch at the Office of the Deputy Chief of Staff for Personnel. "He has a big impact because people trust Soldiers… So if this Soldier is telling me how the Army was for him, he's a living testament of how the Army works. He can address and overcome some objections or concerns that a prospect would have, so once he gets to the recruiter, he probably has his mind made up."

In addition to actually referring people, Soldiers in the A-RAP program are expected to spend time with potential recruits, encourage them and answer any questions they might have about the Army. According to Green, Soldiers need to go with their prospects to see recruiters, and should attend Delayed Entry Program meetings with them after they enlist.

"You are walking this applicant through this process, from the day he joins until he ships, because if you do that, you probably will get him to ship," said Green.

To be eligible for the program, Soldiers also must complete training about the basics of screening individuals to determine their eligibility, and need the approval of their unit commander. Soldiers can only participate in A-RAP when they are off-duty, because they are technically working for a private contactor to provide recruiting assistance, and they can't wear a uniform or use government resources. For legal reasons, commissioned officers and warrant officers cannot participate in A-RAP, although they are still eligible for the $2K program.

For additional information or to apply, visit **https://armyrap.com**.

The Army Reserve has a similar recruiting assistance program called AR-RAP and the National Guard has G-RAP. — *Elizabeth M. Lorge, ARNEWS*

Wii Habilitation

at Walter Reed

Story and Photos by Carrie McLeroy

SPC. Matt Bell began his journey down the road to recovery more than a year and a half ago, after being shot by a sniper while serving as a medic in Iraq.

His treatment and recovery started at Fort Bliss, Texas, and has continued since his transfer to Walter Reed Army Medical Center in Washington, D.C., in May. Bell was hit just above the left clavicle and suffered major nerve damage in his left hand and limited mobility in his shoulder.

"I couldn't even do the simplest tasks," Bell said. "I couldn't tie my own shoes, buckle a belt, button my pants — I couldn't even put my beret on by myself."

Several surgeries and months of physical and occupational rehabilitation later, he is getting back much of the independence he thought was lost. Part of his success can be attributed to an unlikely source — Nintendo's Wii electronic-gaming console.

A successful gaming console since it first landed on store shelves in 2006, the Wii is increasingly used as an engaging form of therapy in retirement communities, and as a way to keep children in many youth programs active while still enjoying video games.

The occupational-therapy clinic at WRAMC has enlisted the system as a highly effective tool that aids in rehabilitation and reintegration. Maj. Matt St. Laurent, an occupational therapist at WRAMC, said incorporating the Wii as a rehabilitation implement made sense.

"We are in the gaming age, and almost all the people who come through here have played video games at some point in their lives," Laurent said. "So it makes sense to use a tool they're familiar with."

Bell said he had only played with the Wii once before arriving at WRAMC, and that was purely for fun. Now, he plays every day. Games have helped him retrain his hand. "Wii Sports" forces him to grip the remote controller and move his hand, and sometimes his entire arm, to play successfully. "Guitar Hero" promotes dexterity in his fingers, which became rigid from lack of use after his injury.

Hector Romero, another WRAMC occupational therapist, said the Wii focuses a patient's attention on playing, not on the pain and fatigue that often accompany rehabilitation.

"When the body is hurt, it tries to stop movement because all it wants to do is heal," Romero said. "With the Wii, patients overcome their fears and the body's reaction to movement. It is a positive distraction, and is extremely effective in improving dexterity and eliciting an increased range of motion."

Spc. Matt Bell sends a pitch just foul during his Wii therapy session in the occupational therapy clinic at Walter Reed Army Medical Center. Bell, who was wounded by a sniper while serving in Iraq, uses the Wii as part of his therapy to help restore dexterity in his hand, which suffered major nerve damage.

Occupational therapists at Walter Reed incorporate other techniques to make the Wii therapy more effective as patients regain strength and mobility, Romero said. During his session, Romero strapped a weight around Bell's affected wrist to increase the strength in his hand, wrist arm and shoulder.

"I might notice the pain in the first minute. But then I get into the game, and I totally forget about it. Then it just becomes fun, and I just try to focus on the game," Bell said.

Romero said they also use resistance bands and have patients play on foam pads to improve balance.

"We try to think about what we can add to the game that will maximize therapy for each patient," he said.

The therapists even combine Wii play with other aspects of therapy. Romero gave the example of a patient with an upper-extremity injury who was asked to hold a weight in his hand with his elbow bent, which forces the forearm down and stretches the muscles, ligaments and tendons.

The exercise can be painful, Romero said, but with the Wii remote in the opposite hand and his attention focused on the game unfolding on the screen, the patient was unaware of the discomfort until after the therapy.

Romero has yet to encounter a patient who hasn't been able to use the Wii as part of therapy, regardless of how extensive the injuries have been.

"We never want to give patients tasks they can't complete," Romero said. "Even if a patient isn't ready for the Wii initially, we put it out there as a possibility."

Once a patient has built up his strength, or in the case of an amputee, becomes comfortable with his prosthetics, they add the Wii to their rehabilitation arsenal.

The Wii not only assists wounded servicemembers with the physical side of rehabilitation, it also plays a vital role in overcoming the mental hurdles many patients experience, Romero said.

"When Soldiers come back from Iraq or Afghanistan with these incredible injuries they think: 'How am I going to recover? How will I ever be normal again?'" Romero said. "But when they're doing things like playing video games, they're doing exactly what was normal to them before."

The most obvious nonphysical results of the game are directly related to its competitive nature, the social interaction it inspires and the hope it gives new patients, Romero said.

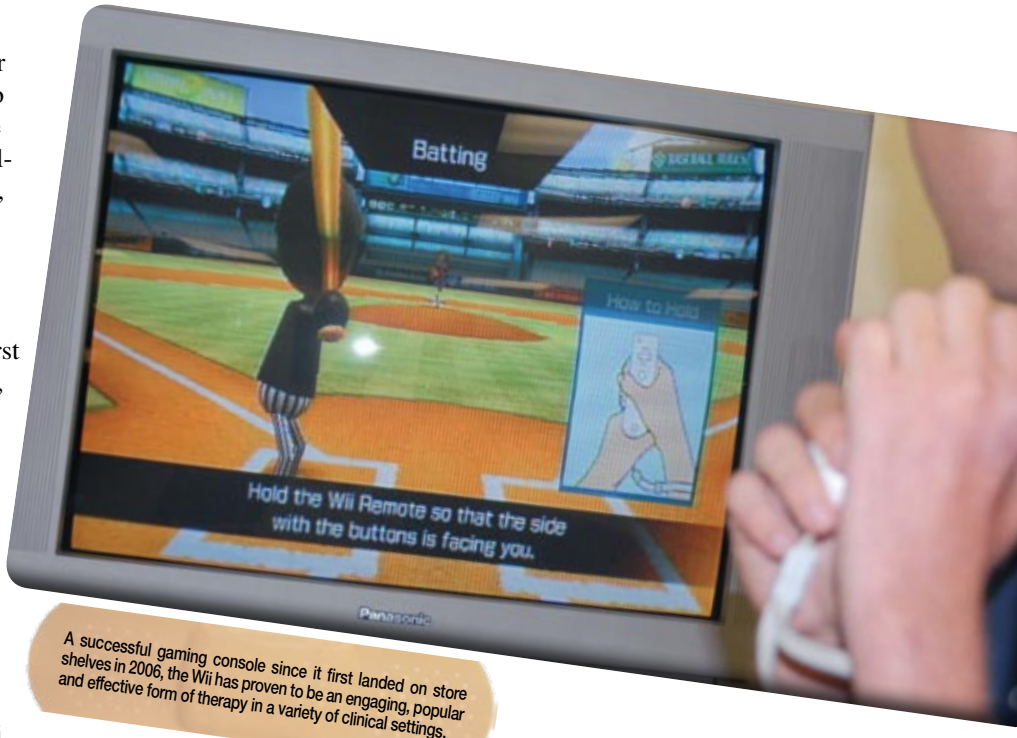
"You can get two guys on the game, someone who's newly injured and someone who has been here awhile. Now they are playing the game together, and the new guy sees how well his opponent is doing. It's motivating, and it gives him something to work for," he said.

Bell added that the game's ability to aid in social re-integration is incredible.

"You'll see these guys who keep to themselves. They don't really talk to anyone. But then they start playing against other people, and they become totally different," he said.

Currently, WRAMC's occupational-therapy clinic has one Wii console, which was donated to the hospital in 2006, shortly after the system's release. Romero said they hope to get more games, including "Wii Fit," to further enhance the occupational therapy process.

"We are always looking for the next tool to engage Soldiers," Romero said. "We have moved into the electronic age, and therapy has to advance with the changing times. The Wii is one step in the evolution of therapy." **sm**



A successful gaming console since it first landed on store shelves in 2006, the Wii has proven to be an engaging, popular and effective form of therapy in a variety of clinical settings.

The motion-sensing Wii remote helps patients improve dexterity and range of motion. The Wii is also an important re-integration tool, allowing patients to socialize and participate in an activity that is familiar to them.

AI & the Army

Story by Carrie McLeroy

A SOLDIER is in charge of reconstruction efforts in an Iraqi town. He and his team must work with the citizens to restore the town's infrastructure and promote stability. He knows that without the respect and trust of the citizens, success will be impossible. How will he know whom to speak with to initiate progress? Who will inform him about cultural nuances so he doesn't offend the very people he is trying to help?

To help answer these questions and better prepare the leaders on the ground, the Army began a multi-year collaboration with the University of Southern California's Institute for Creative Technologies in 1999. Through this partnership, they have been exploring the use of leading technologies combined with gaming and motion-picture industry creativity in non-kinetic training.

The result has been a set of high-tech solutions to issues encountered in-theater that present commanders and Soldiers with "soft-skills" challenges, said ICT computer scientist Ryan McAlinden.

"Soft skills" — or "people skills" as they are also known — deal with understanding human behavior and diverse cultural values, skills vital to the changing and expanding roles today's Soldiers are asked to play. Rather than focus on drills and mechanics, McAlinden said ICT's research and development focuses on realistic simulation technologies, with a concentration on human interactions and emotions.

The institute has developed an array of training platforms for the Army over the past nine years. Projects range from the Joint Fires and Effects Training System, which immerses Soldiers in virtual-reality environments that stress critical decision-making and cultural-awareness training, to the Virtual Reality Assessment and Treatment of Combat-Related Stress Disorder project, which allows veterans to experience a VR combat scenario to process emotions and effects associated with Post Traumatic Stress Disorder.

ICT takes a formal approach to its training package designs, McAlinden said, believing that the instructional design should guide the selection of which technology to employ to solve a problem. Remaining grounded in a formalized procedure allows researchers and developers to focus more on understanding a specific training domain, complete with needs and capabilities, and determine where instruction can be enhanced to meet those criteria.

To help the Army better support the increase in non-kinetic operations in Afghanistan and Iraq, ICT is developing the "UrbanSim" learning package, meant to teach battalion commanders how to prepare for and conduct stability-focused operations, McAlinden said. It's similar

"We continually refine these training tools, and their input guides every aspect of the process."

Artificial Intelligence

to a turn-based strategy game that provides students with concepts and information required to command counterinsurgency or peacekeeping operations.

The Army has become increasingly steeped in non-kinetic operations, enhancing traditional warfare with electronic warfare, influence operations and network warfare operations, and its training methods have adapted to meet those demands.

Success in the game, as in real-life stability operations, is determined through noncombat actions, McAlinden added. The game focuses students on skills needed to provide civil security, civil control, essential services, governance, and economic and infrastructure development.

The training package was developed for the School for Command Preparation at Fort Leavenworth, Kan., and allows battalion and brigade commanders to "practice full-spectrum operations where stability is predominant," McAlinden said.

Commanders must make decisions in the game to secure the local population's support, enable the the host-nation government to be successful, effectively gather intelligence, conduct information operations and coordinate lines of effort. ICT pulled from Army doctrine to develop the training package, which includes a primer course.

Students work together in a joint UrbanSim operation, McAlinden said. The game has an adjacent multiplayer feature, and shows how decisions made in one area of operations affect commanders in other areas.

ICT has collaborated with a variety of other organizations on the project, including the Rossier School of Education, USC Game Innovation Lab, USC Information Sciences Institute, the Army Research Institute and the Army Research Laboratory. The development team also relied heavily on information provided by former battalion commanders from operations Iraqi Freedom and Enduring Freedom to develop a cognitive task analysis. This allowed them to "unpack" the knowledge gained and lessons learned so they could be taught to others, McAlinden said.

In the UrbanSim practice environment, participants are able to practice conducting stability-focused operations from planning through assessment, McAlinden added.

Cultural Environment Annotation is another example of how ICT is using artificial intelligence to create effective training environments. The goal of the CEA project is to support more believable and realistic character decision making, increase behavior variables and enhance user visualization through dynamic gaming technologies.

"Most game and simulation technology today relies on scripted and static techniques for modeling AI behavior. As a result, bland AI sequences are created that fail to exhibit adequate intelligence beyond basic movement and tactical doctrine," McAlinden said.

ICT has approached this problem head-on, embedding contextual information directly in a virtual environment, where an AI character can use information about things like terrain and objects in the virtual world. Artificial-intelligence variables can specify things like ethnicity/race, socio-economic class, faction/sect, political affiliation, employment, age/cohort and various other cultural dimensions.

"The AI characters can then perceive these annotations and use them as a starting point for creating their own cultural representations," McAlinden added. The embedded information creates more believable and easily manipulated AI agents so human players can see their socio-cultural environment, and base their game decisions on that environment.

McAlinden said the behaviors built into the game "affect real human behavior. The AI should be affected by underlying cultural considerations." Both AI characters and human players are aware of their conditions and surroundings and able to make decisions inside the virtual environment as a result of that knowledge.

ICT and its partner organizations continue to work with Soldiers and Army leaders to determine training needs. McAlinden said that continuing relationship is vital to the success of any training development program.

"The Army domain is so dynamic. Throughout development, testing and a finalized design, we keep the classroom in the loop," he said. "We continually refine these training tools, and their input guides every aspect of the process.

Ultimately, McAlinden said the projects at ICT are developed to improve the operational capabilities of the Army.

"The guys on the ground need situational understanding of the battlefield. We give them an entire knowledge set and decision making tools necessary for successful operations," he said. **sm**

Testing...

The Joint Experimentation Range Complex at Yuma Proving Ground, Ariz., conducts testing that reflects the realities confronting U.S. military forces and their coalition allies in Iraq.

Story by Mike Cast

AS the Army combats terrorism, its top priority is to give Soldiers the weapons and equipment they need to defeat their enemies and avoid death and serious injury from such threats as improvised explosive devices.

The U.S. Army Test and Evaluation Command and its subcommands are testing and evaluating urgently needed warfighting systems so Soldiers can effectively conduct their missions with the least possible threat to their lives.

Many of these systems are relatively new or have recently been upgraded, so the ATEC is relying on its Developmental Test Command to provide system data and reports based on high-priority test programs. Besides the test program Stateside, the DTC and its test centers have sent employees and Soldiers to Kuwait, Afghanistan and Iraq.

Testers in theater support ATEC's forward-operational assessments of weapon systems. At the DTC test centers throughout the United States, the pace of testing has been accelerated to meet the needs of an Army at war.

The DTC's test program for Mine-Resistant, Ambush-Protected vehicles has been getting a lot of attention from senior Army and Marine Corps leaders. At Aberdeen Test Center, Md., and Yuma Proving Ground, Ariz., officials have conducted a series of tests to help program managers gage the MRAP's performance and ballistic protection.

When Army and Marine Corps program managers identified requirements for MRAP testing in 2008, ATC commander Col. John Rooney directed some 240 of his employees to work on the MRAP test program. They worked well beyond normal duty hours to get the job done, an effort that is helping save lives on the battlefield, Rooney said.

Operational-assessment teams in theater have provided essential feedback for testers, said Scott Dellicker, chief of the National Counterterror-

Mike Cast works at the Developmental Test Command Public Affairs Office.

A technician prepares samples for testing at Dugway Proving Ground's West Desert Test Center. The center is the Army's and Defense Department's premiere organization for testing chemical and biological defensive systems.

Ballistic testing at Aberdeen Test Center, the Army's live-fire center of expertise, is designed to determine the threats that the Army's ground-based weapon systems can withstand.

Warfighting Systems

ism/ Counterinsurgency Integrated Test and Evaluation Center at Yuma Proving Ground. The center has been testing a variety of counter-IED systems to help the Army and Defense Department field those that are most effective.

Testing has focused on system performance, interoperability and friendly-force communications, Dellicker said.

"The proving ground has rugged desert terrain and specially constructed facilities that replicate key urban areas overseas," said Chuck Wullenjohn, a YPG spokesman. "The resulting test data provide a better prediction of counter-IED system performance."

The Army has relied on the DTC's Electronic Proving Ground at Fort Huachuca, Ariz., to test military systems that provide command and control, communications, computer capabilities, intelligence, surveillance and reconnaissance.

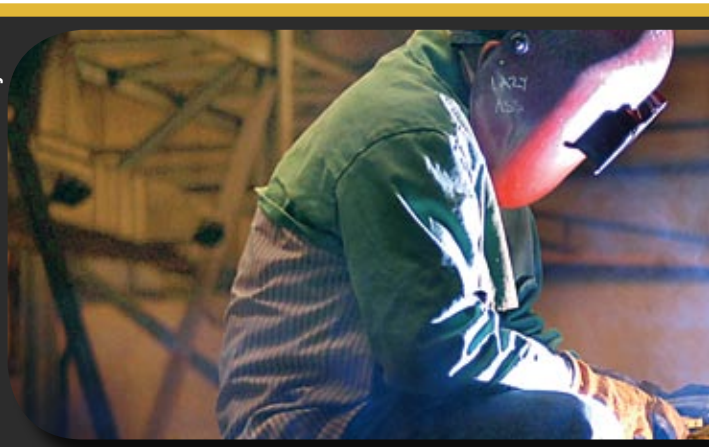
Much of its testing is directed toward various counter-IED systems at the EPG and the ATEC's Intelligence and Electronic Warfare Test Directorate, also at Fort Huachuca. They have been working with the NACCITEC to determine which systems are most effective, said Ed Watt, chief of the EPG's Counterterrorism Division.

"Testing at Fort Huachuca and elsewhere has ensured that design changes, protocol modification and overall system improvements have not degraded system performance," Watt said.

Command-and-control messaging and situational awareness among friendly forces are crucial if units are to conduct joint operations, minimize the impact of electromagnetic compatibility issues and avoid "fratricide," he added.

Testers at the DTC's White Sands Missile Range in New Mexico have subjected one such system to electromagnetic environments testing, to determine the hazards of electromagnetic radiation to personnel and

A Mine-Resistant, Ambush-Protected vehicle undergoes an improvised explosive device test at Aberdeen Test Center, which specializes in both automotive and ballistic testing of developmental combat land systems.



Cherie A. Thurlby

their susceptibility to external radio frequencies, WSMR officials said.

The system is designed to clear land mines in various types of terrain. It is intended for clearing areas where suspected pressure-detonated mines and explosive devices are present, officials said.

The DTC's Redstone Technical Test Center in Alabama has supported the war effort by testing various missiles for the Army and Air Force. Because of this extensive testing, the Army has made modifications so Soldiers can launch missiles from both the Predator and the AH-64 Apache attack helicopter.

In February 2007 DTC personnel at Redstone deployed to Kuwait to test missiles in theater. Using their test sets and mobile surveillance vans, the Redstone testers were able to collect information to help the Army determine the effects of storing these weapons in the Middle East. The data collected are enabling the Army to determine the full shelf life of the missile systems.

Other areas of research focus on helping Soldiers find and neutralize adversaries who may be hidden among the civilian population; detect such hazards as chemical and biological agents; and protect aircraft crews from missiles.

Additionally, during fiscal year 2007, testers at the Redstone test center conducted safety and performance tests of systems designed to enhance perimeter force protection, officials said.

The CH-47F Chinook improved cargo helicopter undergoes a test flight at the Developmental Test Command's Aviation Technical Test Center. The facility is the Army's center of expertise for testing aircraft and aviation systems, many of which have been used in Afghanistan and Iraq.

One such electro-optical/infrared imaging system enables its operators to slew the device's view to the position indicated by data received from radar. The operators can then manually fine tune the view, designate a target using an onboard laser range

Workers at Force Protection Industries Inc. make Cougar H 4x4 Mine Resistant Ambush Protected vehicles at the factory iin Ladson, S.C. The Developmental Test Command has played a key role in the vital MRAP acquisitioin program.

Military weapon systems such as projectiles, fuzes and artillery pieces undergo frigid-weather testing at the Cold Regions Test Center at Fort Greely, Alaska. This Developmental Test Command center specializes in testing the performance of systems in extremely cold weather.

finder and collect a variety of geolocation data.

A system designed to protect Army aircraft from enemy missiles depends on the accuracy of its sensors and the rapid deployment of countermeasures. ATTC experimental test pilots have deployed to Afghanistan and Iraq and flown combat missions to assess the system, as well as one that is used for designating targets and providing night vision. ATTC modified its test infrastructure to test the systems more effectively, producing data from both the United States and the combat theater, so the Army could better evaluate system performance.

A Javelin missile is fired from a remote test station at the Redstone Techincal Test Center, where the Army tests small rockets and some aviation systems.

And to help the Army counter threats that are less lethal than roadside bombs, mines or missiles, Aberdeen Test Center has tested a system that includes loudspeakers and illuminating devices.

Stryker units in the combat theater have helped the Army test and evaluate this system, and Soldiers who have received in-depth training on it are taking part in a follow-up evaluation in theater.

The Army relies on the DTC to test airdrop-delivery technologies at YPG, including the family of airdrop systems fielded on a limited basis. They are designed to provide accurate aerial delivery of high-value cargo to troops from high altitudes, reducing risk to delivery aircraft.

The test center at Yuma also has tested low-altitude delivery systems using five parachute configurations. This system is designed to provide highly accurate delivery of critical supplies — such as small-arms ammunition and subsistence items — to troops in regions far from the supply lines. The system's use is intended to significantly reduce the number of wheeled supply convoys on roads in theater and ultimately reduce Soldiers' exposure to deadly roadside bombs, officials said. **sm**

Intelligent

"MI Soldiers continually strive to gather the information that preserves freedom and save lives."

Sgt. Mike Pryer

Sgt. Scott Monahan — a tactical human intelligence team leader with Company B, Special Troops Battalion, 2nd Brigade Combat Team, 82nd Airborne Division — points out the trail likely used by insurgents while investigating a roadside bomb blast along a road in the Basateen section of Baghdad's Adhamiyah District.

The reflection in the thermal camera catches Spc. Jonathan Jones using the SC2000 infrared camera to focus on his target during the MASINT Collection and Analyst Course at Fort A.P. Hill, Va. (Above photo by Staff Sgt. Jason Cauley)

Intelligence

Story by Staff Sgt. Jason Cauley

IMAGINE putting yourself in the mind of your enemy, focusing on his every motivation, concern and ambition, committing yourself to his way of life and understanding him and how he interacts with the world around him.

Finally, you understand your enemy's purpose and plan, and are prepared to take action before he can do any harm.

This may seem like a daunting, endless task, and it is, but this is the daily mission of the military intelligence Soldier.

Whether using the latest and best in video, satellite and audio technology, or meeting face to face and building relationships with foreign sources, MI Soldiers continually strive to gather the information that preserves freedom and saves lives.

To accomplish their mission, they rely most on the training they have received. It is with that in mind that the U.S. Army Intelligence and Security Command initiated the Foundry Program in January 2006. It's intended to elevate and sustain Soldiers' tactical-intelligence skills and capabilities by providing them with advanced technical and tactical training.

"The Army is transforming intelligence training from a focus on centralized, single-discipline processes and procedures to more broadly distributed techniques that generate actionable intelligence at all levels across the force," said Lt. Gen. John F. Kimmons, the Army deputy chief of staff for intelligence. "This Department of the Army-directed, INSCOM-led program builds on foundational MI training and can be tailored specifically for Soldiers' and units' needs."

Working with U.S. Army Forces Command and U.S. Army Training and Doctrine Command, the Foundry Program has trained more than 14,200 active-duty and reserve-component MI Soldiers in every intelligence discipline since its inception less than three years ago.

Although the Foundry Program has more than 90 official training classes and courses — ranging from joint collection management to counter terrorism analysis — instructors are able to redesign the course to fit nearly any timeline.

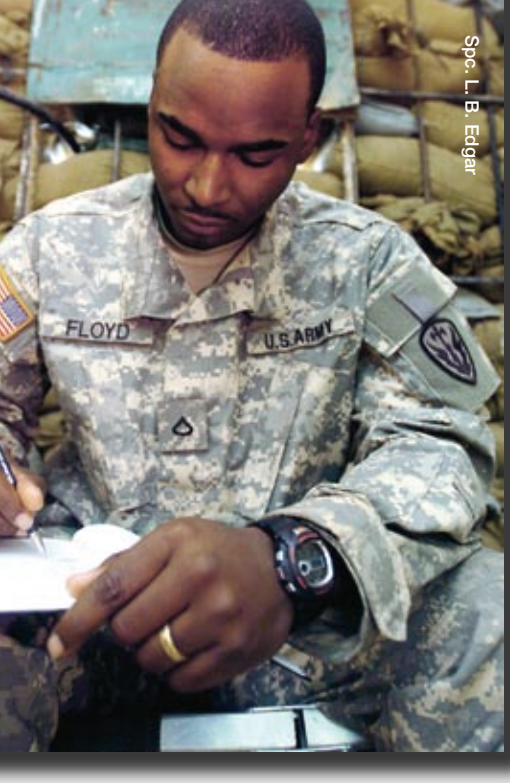
"It's important that we're flexible, in terms of the units' needs," said Staff Sgt. Jack Williams, an instructor in Measurement and Signature Intelligence and the Advanced Geospatial Intelligence Collection and Analyst Course at Fort Belvoir, Va. "We can be as over-arching or as completely detailed as we need to be."

"We're able to get valuable information before the fight," said Capt. Martin Lee, of the 2nd Infantry Division's 14th Cavalry Regiment, after attending signal-intelligence training at Fort Lewis, Wash. "We are directly supporting the unit we're replacing. It's a tremendous advantage for all of us."

While the live-environment training simulates the real-world and real-time tactical-intelligence mission and duties faced by these Soldiers, the classroom training focuses on the theoretical and technical aspects of intelligence gathering. Considering today's continually evolving fields of battle, the training can be invaluable.

"We were able to get training on the newest equipment — hands-on training we couldn't get before," said Lee. "The intelligence world is so fluid now. You have to have training like this to keep up."

Besides the training at forts Lewis and Belvoir, training takes place regularly at other installations, including Fort Meade, Md.; Fort Gordon, Ga.; Fort Bragg, N.C.; and Fort Hood, Texas. If commanders are unable to send their Soldiers to



Spc. L. B. Edgar

(Left) Pfc. Michael Floyd, a human-intelligence collector and member of 1st Platoon, Headquarters and HQs. Company, 504th Military Intelligence Brigade, studies interview notes inside Combat Outpost Casino in the Ghazaliya district of Baghdad. Floyd provides military intelligence to commanders on the ground by tactically questioning persons of interest in the area of operations.

(Right) A student from the MASINT Collection and Analyst Course captures infrared video of a passing helicopter during a field exercise at Fort A.P. Hill.

Staff Sgt. Jason Cauley

one of the locations, the training will come to them.

"We have to be able to go to the Soldier, and the training must be tailored to their needs," said Bruce Benedict, Human Intelligence Foundry Program manager at Fort Meade. "We're not going to teach you how we do it. We're going to teach you how you do it – only better," Benedict said.

According to one Foundry Program instructor at Fort Meade, the ability to travel to the troops is not only beneficial from a tactical training standpoint, but also from a financial standpoint.

"It is certainly cheaper to send four or five instructors to a unit than it is to send 15 or 20 Soldiers to us," she said.

The need for up-to-date technical training is a constant throughout the intelligence field. In a world where the accomplishment of your mission depends on your competence with your equipment, being able to train as you fight is not a luxury or privilege, it is an absolute necessity.

"One of the most important aspects of the Foundry Program is that we are actually getting to meet face to face with a lot of the people who will directly support us when we are in country," said Pfc. Evan Healy, a signal intelligence analyst in the 4th Inf. Div.

The classroom and live-environment training the Soldiers receive, coupled with the advantage of getting to know others who will be serving with them during deployments, helps eliminate the learning curve that so many Soldiers face when they first arrive in Iraq and Afghanistan.

"I can't tell you how much that paid off," said 1st Lt. Bob Stasio, a 4th Inf. Div. signals-intelligence platoon leader, who was able to have four analysts complete the signal intelligence live-environment training at Fort Gordon before deployment. "Those four Soldiers have the greatest understanding of collection and analyst tools to do their job in the platoon. The experience they gained cannot be overestimated."

One other important factor Soldiers are able to take away from their training is the ability to stay in contact with their instructors and fellow classmates long after the training ends. In a profession shrouded in privacy, it can be easy for Soldiers to feel alienated and cut off from the rest of the Army, and even their own unit.

"We provide Soldiers the ability to continue leveraging Army resources," Benedict said. "And so they know they're not out there alone."

Benedict is quick to note, however, that the Foundry Program is not a replacement for traditional intelligence training.

"Foundry is designed to enhance and build on the core training Soldiers received through TRADOC. Our job is to make a well-trained Soldier even better," he said.

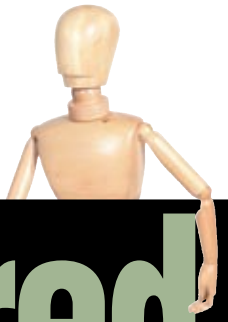
Despite the program's early and continuing success, Foundry supporters feel that awareness and enthusiasm from senior Army leaders is vital to the innovative program's continued success.

"Commanders must know how important this training is to mission success," said Lee. "They have to be willing to tap into everything it has to offer."

"The need and demand for Foundry training have never been greater," said Kimmons. "Foundry training and capabilities are essential to help our Soldiers gain a deeper understanding of battlefield dynamics. Successful MI teams must know how to put all the analytical pieces together along tactically useful timelines. Foundry is playing a key role in making that possible." **sm**

Staff Sgt. Jason Cauley works in the INSCOM Public Affairs Office. Staff Sgt. Christopher Fincham of the 116th Military Intelligence Group contributed to this article.

A Dummy. . .



Named Fred

Story and Photo by Pfc. Monica K. Smith

EDUCATORS say the best way for students to learn any task involves actually having them perform the task.

When it involves inserting a needle into the chest of another person, a training manual is often a Soldier's best friend.

Fortunately for Soldiers of the 3rd Infantry Division's Company C, 2nd Battalion, 3rd Aviation Brigade, a medical-evacuation company stationed at Camp Taji, Iraq, a "volunteer" named Fred surfaced.

Fred's real name is Vital Sim, and he's "the best realistic depiction of a person in trauma and exhibiting various medical conditions," said Co. C's Staff Sgt. Paul McQuown.

The medical training-aid mannequin allows medics to simulate various trauma situations; Fred can make sounds similar to coughing, breathing and even vomiting. He comes with multiple interchangeable parts, some of which allow medics to apply a burned face to simulate a burn victim.

"This is the best-feeling dummy I've used for practicing IV insertion," said Staff Sgt. Robert Congdon. "If you insert the IV correctly you can see a flash and know the liquid is dripping properly."

Fred cost $8,000 and his accessories averaged around $700, said McQuown. The medics practice procedures and brush up on their skills, with help from their training buddies.

"Skills are perishable if you don't get to practice them," said Co. C's 1st Sgt. Todd Burke. "A new medic who just arrived in Iraq can fly with us and see what happens, but he won't get to do the procedures on the people we pick up, because we're dealing with someone's life — often a life or death situation."

Co. C Soldiers also built a model, complete with two litters, that replicates the inside of a Black Hawk helicopter to help them practice working on patients in a confined space.

"We conduct training on some equipment that we wouldn't be able to use on real people, unless they needed it," McQuown said. "No one is going to volunteer to have a tube put down their throat or get a needle decompression in their chest." **sm**

Spc. Rocky Blair of Company C., 2nd Battalion, 3rd Aviation Brigade, performs a needle decompression on Fred at the Camp Taji medical facility.

Pfc. Monica K. Smith is assigned to the 3rd Infantry Division, 3rd Combat Aviation Brigade, Public Affairs Office.

Story by Sgt. 1st Class Timothy Wagner

AECP

Commissioning New Nurses

JOHN D. Derr enlisted in the Army in 1984. At the time, he thought about a career in medicine but had little idea how much education would be involved in pursuing that career. Not a strong student in high school, Derr thought that a medical career was out of reach. As it turns out, joining the Army did not mean he had to put aside his interest in medicine.

More than two decades later, he is a second lieutenant and clinical staff nurse in the Intermediate Care Unit at Walter Reed Army Medical Center in Washington, D.C. That is largely thanks to support he got from his participation in the AMEDD Enlisted Commissioning Program.

Each year, AECP gives up to 100 eligible enlisted active-duty, Army Reserve or National Guard Soldiers the opportunity to complete undergraduate or graduate degrees in nursing, and then be commissioned as Army Nurse Corps officers.

Through the program, Derr was able to receive pay at his previous enlisted rank during the two years he spent as a full-time student at the University of Pennsylvania, where he earned a Bachelor of Science degree in nursing. AECP continues pay and benefits to participants for up to 24 consecutive months of enrollment. The program also funded up to $9,000 in academic costs per year.

Though not a traditional path to a nursing career, Derr said enlisting in the Army helped him fulfill his dreams of working in medicine. He began his Army career as a combat medical specialist, serving his first three years on active duty. Following his discharge in 1987, he attended Wilkes University in Wilkes-Barre, Penn., as an international studies major. During his time at Wilkes he joined the Army Reserve's 11th Special Forces Group.

2nd Lt. John Derr, who gained his nursing degree through the AMEDD Enlisted Commissioning Program, is a clinical staff nurse in the Intermediate Care Unit at Walter Reed Army Medical Center, Washington, DC. He is pictured with his mentor, Christine Rupprecht, nurse manager, Acute Pain Service, Regional Anesthesia And Pain Management Initiative.

After graduating from the Special Forces Medical Sergeant Course in 1994, he re-enlisted, serving in the 10th SFG.

Derr said he enjoyed the demanding nature of, and challenges posed by, the special-forces community. "We were able to do things that other people only dream about," he said.

Although he appreciated his position and responsibilities as a special-forces medic, when he found out about AECP, Derr realized his dreams of a second career were achievable. To be eligible for AECP as an active-duty Soldier, he had to have had from three to 17 years of active service at the time of commissioning. Reserve Soldiers must have less than 15 years of combined service upon applying for the program.

After getting his degree from the University of Pennsylvania and attending the Officer Basic Course at Fort Sam Houston in Texas, Derr was assigned to WRAMC.

There, he still enjoys the esprit de corps that he felt in special forces. He sees more challenging cases than registered nurses in civilian hospitals do, and said he finds it especially satisfying to help Soldiers who have been injured during service.

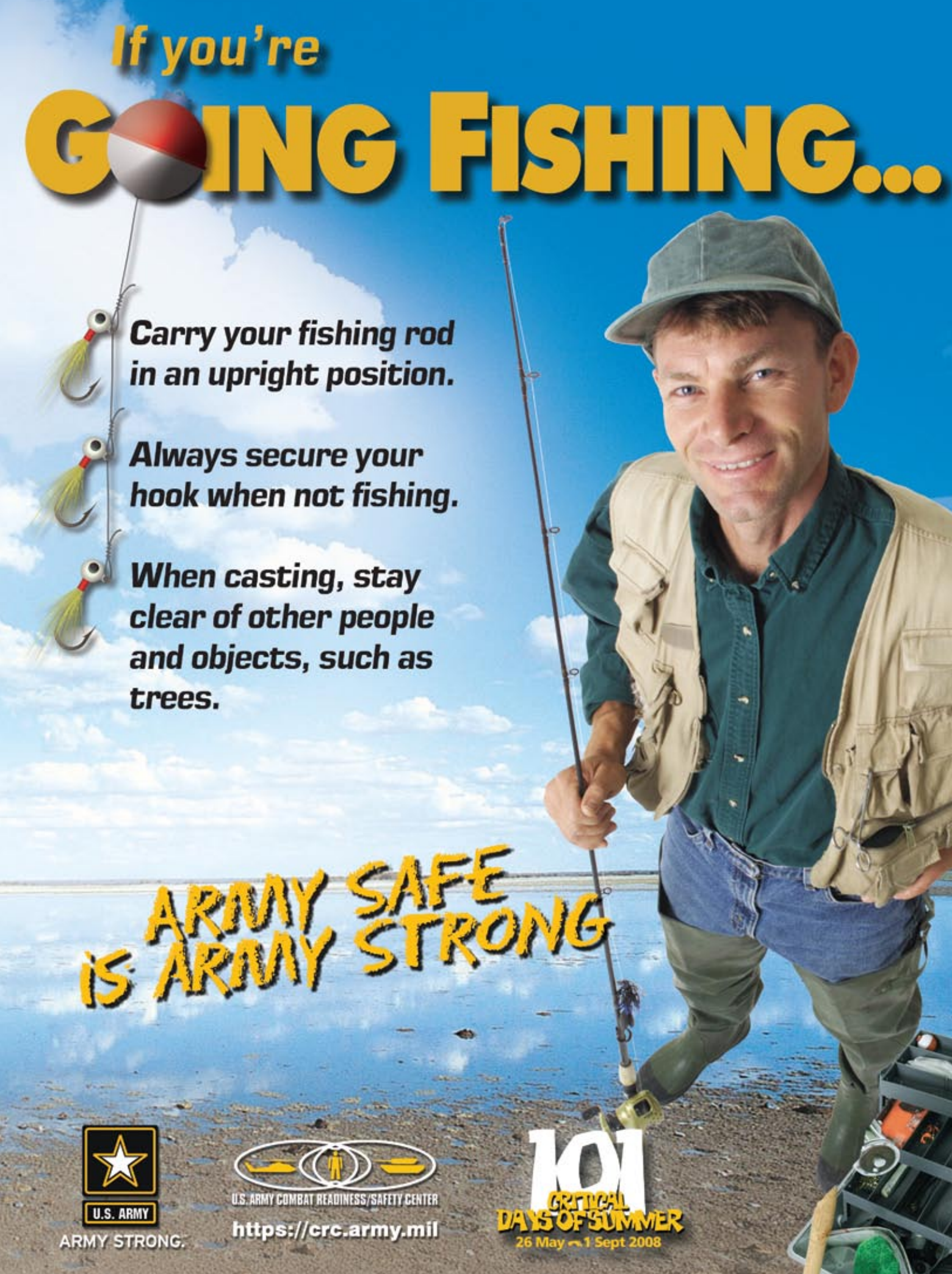
Derr said his journey to becoming a staff nurse at WRAMC shows that if you persevere, you can achieve your dreams, no matter what they are.

"Anything is possible if you put your mind to it," Derr said. "Just never lose sight of your goals."

If you are interested in learning more about the AMEDD Enlisted Commissioning Program, e-mail Sgt. 1st Class Timothy Wagner at **aecp@usarec.army.mil**. sm

Sgt. 1st Class Timothy Wagner is the AECP program manager for U.S. Army Recruiting Command at Fort Knox, Ky.

If you're GOING FISHING...



Carry your fishing rod in an upright position.

Always secure your hook when not fishing.

When casting, stay clear of other people and objects, such as trees.

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